

IBTrACS Workshop Overview

Purpose: The workshop will gather international experts in global tropical cyclone best track data to discuss a variety of topics that would serve to enhance the existing IBTrACS dataset.

Workshop Goals and Topics: The workshop will strive to accomplish several important goals, which include:

- Document the operating procedures at the various RSMC and forecast offices, with an emphasis on changes in processes or capabilities which would affect best track homogeneity;
- Resolve issues related to the various wind-pressure relationships used globally toward a homogeneous data set;
- Determine how wind speed adjustments should be included in IBTrACS;
- Assess available metadata and how to best record for incorporation into IBTrACS;
- Explore other possible parameters for IBTrACS, including such items as the radius of maximum winds (RMW), and the radius of outermost closed isobar (ROCI), with an emphasis on what can be done on a global scale;
- Prepare for a global tropical cyclone reanalysis by discussing the available resources at each RSMC and forecast center.

A white paper summarizing these findings and a general discussion of other key points will be generated after the workshop concludes.

To accomplish these goals, the following topics related to best track compilation will be discussed:

1. Tropical cyclone position
2. TC Maximum Sustained Wind (MSW)
 1. Gust period (1 minute versus 2 minute versus 10 minute)
 2. Wind Adjustments (e.g., Emanuel adjustment of HURDAT)
3. Minimum Central Pressure (MCP)
 1. Wind Pressure Relationships
4. Other potential parameters for inclusion in IBTrACS:
 1. RMW (4-quadrants), ROCI, eye diameter, etc.
 2. Data from other sources (extended best track, Objective Dvorak Technique, etc.)
 3. QA/QC and related flags
5. Tropical Cyclone Operating Procedures
 1. For each RSMC/forecast center determine when tools for analysis, satellite data, Dvorak technique, reconnaissance flights, etc., began and ended.
6. Recording changes to Best Track data
 1. Discuss how/what was historically done.
 2. Discuss what we have, what we need.
7. Global Reanalysis Discussion
 1. What plans exist at the RSMCs and forecast centers

2. Discussions planned on collaboration, international buy-in, and outreach to determine a preferred method for reanalysis data to be built back into IBTrACS.

Workshop format:

The format of the workshop will be one to three presentations on a topic followed by moderated discussion amongst the participants in break-out groups over the course of two and a half days. Abstracts for a poster session featuring relevant topics to global best track data improvements/enhancements will be considered.

May 5, 2009 (Day 1)

9:00am – Workshop Goals, Agenda, Logistics (NCDC)

9:15am – Welcome (Tom Karl, Director, National Climatic Data Center)

9:30am – Overview of IBTrACS (NCDC)

Session 1: Operating Procedures

10:00am – Review of survey materials (NCDC)

[15 min] – Presentations from each attending agency.

10:20am – Group discussion on operating procedures

Questions:

- When did Dvorak analyses begin?
- In what year was satellite data routinely used for advisories?
- How did TC observations change with time?

12:00pm – Lunch (on own)

Session 2: Wind Pressure Relationships

1:15pm – Global Wind Pressure Relationships (Knaff)

1:35pm – The Beta Parameter (Holland)

1:55pm – Breakout group charges

- *What wind pressure relationships are currently available?*
- *How should wind pressure relationships be used?*
- *What is the history and applicability of wind pressure relationships?*

2:00pm – Breakout groups

Group A: Room 504

Group B: Room 541

Group C: Room 473

3:30pm – Break

4:00pm – Report out

4:45pm – Wrap up and summary

5:30pm – Group Dinner [walk-able distance from NCDC]

May 6, 2009 (Day 2)

8:30am – Goals for today

Session 2: Wind Speed Conversions and Adjustments

8:40am – Wind Speed Conversion Issues in the Western North Pacific (Lander)

9:00am – New Wind Speed Conversion (BoM)

9:20am – Panel Discussion (Lander, BoM, Holland, Knaff)

Questions:

- 1 minute versus 10 minute versus X minute? [what is, what will be used]
- What should be used as the standard?
- How does one compute historic conversions? [What was used?]

10:00am – Break

10:30am – Wind adjustments (Landsea)

11:00am – Group Discussion on Wind Adjustments

Questions:

- Should wind adjustments be made to BT data? Why or why not?
- Global wind adjustment?

12:00pm – Lunch (on own)

1:15pm – Breakout group charges

- *What other BT data is out there? What's the best way to get it to NCDC for inclusion into IBTrACS?*
- *Should other parameters be included in IBTrACS? ROCI? RMW? Why?*
- *Should BT data include estimates from other sources? Satellite? Dvorak intensities? Why?*

1:20pm – Breakout groups

Group A: Room 504

Group B: Room 541

Group C: Room 473

2:30pm – Report out

3:15pm – Break

Session 3: Poster Session [3:30pm to 5:00pm]

5:00pm – Adjourn

May 7, 2009 (Day 3)

8:30am – Goals for today

Session 4: Global Reanalysis and Changes to Best Track Data

8:45am – Global Reanalysis: User Needs and Historical Context (Murnane)

9:05am –HURDAT reanalysis efforts: techniques, resources, and data (NHC Best Track Comm.)

9:25am – Panel Discussion: Agency Reanalysis Plans (BoM, NHC, Reunion...)

Questions:

- What are the plans at each agency?
- Who/how should a global reanalysis be coordinated?

10:00am – Break

10:15am – Continue Panel Discussion

11:30am – Workshop Wrap-up Presentation (NCDC)

12:00pm – Workshop Concludes